

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CLAYTON FORBES HALLER
and CHARLES PRIOR HALL

Appeal No. 2000-1338
Application 09/107,241

ON BRIEF

Before CALVERT, FRANKFORT and McQUADE, Administrative Patent Judges.

McQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Clayton Forbes Haller et al. appeal from the final rejection of claims 1 through 3, 13 and 14. Claims 4 through 12, the only other claims pending in the

application, stand allowed.

THE INVENTION

The invention relates to a portable, pressurized, solar-heated shower for camping and other outdoor activities, and to a method of using same. Claims 1 and 13 are illustrative and read as follows:

1. A portable shower, comprising: three superposed sheets of flexible material sealed peripherally together to form first and second closed chambers on opposite sides of one of the sheets, water enclosed within the first chamber, an elongated flexible hose communicating with the first chamber and having a shower head at a distal end thereof, and pressurized air in the second chamber pressurizing the water in the first chamber and causing the water to be expelled through the hose and the shower head.

13. In a method of using a portable solar heated shower having first and second chambers on opposite sides of a flexible membrane, the steps of: introducing water into the first chamber, exposing the shower to the sun to warm the water, and introducing air under pressure into the second chamber to bring the pressure within the second chamber up to a level sufficient to expel the water from the first chamber through a hose and a shower head in communication with the first chamber.

THE PRIOR ART

Appeal No. 2000-1338
Application 09/107,241

The references relied upon by the examiner as evidence of obviousness are:

Hall (Hall '793)	4,520,793	June 4, 1985
Hall (Hall '908)	5,774,908	July 7, 1998
Du Plooy (British Patent Document)	2 035 542	June 18, 1980

THE REJECTION

Claims 1 through 3, 13 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Du Plooy in view of Hall '793 and Hall '908.

Attention is directed to the appellants' main and reply briefs (Paper Nos. 13 and 15) and to the examiner's answer (Paper No. 14) for the respective positions of the appellants and the examiner with regard to the merits of this rejection.

DISCUSSION

Du Plooy, the examiner's primary reference, discloses a

Appeal No. 2000-1338
Application 09/107,241

portable, solar-energized water heater 10. As described by Du
Plooy,

[t]he solar heater has a first base sheet 12, a second intermediate sheet 14 and a third translucent sheet 16. The sheets 12, 14 and 16 are all joined together along their peripheries to define a liquid compartment 18 and an air compartment 20.

The air compartment 20 has a closable opening in the form of a nipple 22 which contains a non-return valve (not shown) and has a closure plug 24.

The air compartment is thus inflatable by blowing into the nipple 22 or, if desired, by the use of a foot operated pump 26 as shown in Fig. 5. The pump 26 has a flexible pipe 28 terminating in a nozzle 30 which is a neat fit into the nipple 22.

The liquid compartment 18 has two closable openings fitted with valves 32. One form of valve is shown in Fig. 4 while another is shown in Fig. 6. Each valve 32 has a pipe 34 leading to it and can serve as an inlet or an outlet dependent upon the orientation of the solar heater.

One of the pipes 34 which is intended to serve as an inlet for the liquid compartment 18 conveniently has an attachment (not shown) at its free end to permit ready attachment to a tap [page 1, line 114, through page 2, line 22].

As for the use to which this water heater may be put, Du Plooy teaches that

[t]he solar heater is particularly suited for occasional or temporary use, e.g. as an item of camping equipment. While not in use, the solar heater can comprise a tightly rolled bundle for transport and storage. In use, the heater will be unrolled and either placed with its blanket 46 on a surface or be suspended by one or more of the handles 52, preferably at an inclination to the

horizontal and facing the sun. Water is introduced into the liquid compartment 18 via one of the pipes 34 to fill it. The gas compartment 20 is then filled with air. After a period of time, water in the liquid compartment will be heated and can be drawn off via one of the pipes 34. The water can be replenished in the liquid compartment 18 from time to time as required and the heater may be moved from time to time to keep the translucent sheet 16 facing towards the sun. When no longer required, the water can be released from the liquid compartment 18 and air from the gas compartment 20 and the heater is rolled up for storage [page 2, lines 68 through 90].

Du Plooy teaches, or would have suggested, a device and method meeting all of the limitations in independent claims 1 and 13 except for those relating to the shower head. In this regard, Du Plooy does not indicate that the free end of the liquid compartment's outlet pipe or hose 34 has a shower head or any other element attached thereto.

The appellants' contention (see pages 2 through 5 in the main brief and pages 2 and 3 in the reply brief) that Du Plooy also lacks response to the limitations in claims 1 and 13 relating to the pressurized air in the second chamber for pressurizing/expelling the water in the first chamber is not persuasive. In considering the disclosure of a reference, it

is proper to take into account not only the specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968). As noted above, Du Plooy teaches that in use the solar water heater 10 can be either placed on a surface or suspended by its handles, preferably (but not necessarily) at an inclination to the horizontal, and that the air compartment 20 is inflated by a foot pump 26 after the liquid compartment 18 is filled by connection to a tap. One skilled in the art would reasonably be expected to draw the inference from these teachings that Du Plooy's purpose in inflating the air compartment 20 is to pressurize the water in the liquid compartment 18 to facilitate expelling it. The appellants' position to the contrary fails to take into account the level of skill which must be presumed on the part of the artisan (see In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985)). Along these lines, there is nothing in the fair teachings of Du Plooy which, as urged by the appellants, would have led the artisan to conclude that the air compartment 20 has only a "thermal" function, that the liquid compartment 18

is intended to be replenished while the air compartment is inflated, or that the liquid compartment 18 could not actually be replenished (e.g., by use of a relatively high pressure tap) while the air compartment 20 is inflated. Furthermore, none of the claims requires, as implied by the appellants, that the pressurized air in the second chamber be capable of lifting the water in the first chamber to an elevated position.

As for the failure of Du Plooy to meet the shower head limitations in claims 1 and 13, the examiner's reliance on the Hall patents to cure this deficiency is sound. Each of the Hall patents discloses a solar-heated, outdoor shower device comprising a flexible plastic chamber adapted to be filled with water and an outlet hose with a spray or shower head on the free end thereof. The examiner's conclusion (see page 3 in the answer) that the Hall patents would have suggested the provision of a shower head on the free end of Du Plooy's liquid compartment outlet hose 34 (to accommodate showering) is reasonable on its face and has not been specifically challenged by the appellants. For the reasons discussed

Appeal No. 2000-1338
Application 09/107,241

above, the resulting device and method would meet all of the limitations in independent claims 1 and 13.

Claim 2 depends from claim 1 and requires the claimed shower to include a foot operated pump for introducing the pressurized air into the second chamber. Du Plooy discloses such a foot pump 26.

Claim 3 depends from claim 2 and calls for the foot pump to be enclosed in a flexible container and connected to the second chamber by a flexible air line. Du Plooy's foot pump 26 is connected to air compartment 20 by a flexible pipe or air line 28. Although Du Plooy does not disclose the pump as being enclosed in a flexible container, the examiner's conclusion (see page 4 in the answer) that this feature would have been an obvious matter of choice is reasonable. It is well settled that a conclusion of obviousness may be based on common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.

In re Bozek, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Here, it would have been an obvious matter of common

Appeal No. 2000-1338
Application 09/107,241

sense well within the level of ordinary skill in the art to enclose the Du Plooy pump in a flexible container in order to protect it from undue wear.

Finally, claim 14 depends from claim 13 and requires the air pressure in the second chamber to be brought up to a level on the order of 2-3 psi. The provision of such a relatively low level of pressure in Du Plooy's air compartment 20 would have been an

Appeal No. 2000-1338
Application 09/107,241

obvious manner of accomplishing Du Plooy's suggestion of
pressurizing and expelling water from the liquid compartment
18.

In light of the foregoing, the combined teachings of Du
Plooy and the two Hall patents justify the examiner's
conclusion that the differences between the subject matter
recited in claims 1 through 3, 13 and 14 and the prior art are
such that the subject matter as a whole would have been
obvious at the time the invention was made to a person having
ordinary skill in the art. Accordingly, we shall sustain the
standing 35 U.S.C. § 103(a) rejection of these claims.

SUMMARY

The decision of the examiner to reject claims 1 through
3, 13 and 14 is affirmed.

Appeal No. 2000-1338
Application 09/107,241

No time period for taking any subsequent action in
combination with this appeal may be extended under 37 C.F.R.
§ 1.196(a).

AFFIRMED

	IAN A. CALVERT)	
	Administrative Patent Judge)	
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)) BOARD OF
PATENT			
	CHARLES E. FRANKFORT)	APPEALS
	Administrative Patent Judge)	AND
)	
INTERFERENCES)	
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)	
	JOHN P. McQUADE))
	Administrative Patent Judge)	

Appeal No. 2000-1338
Application 09/107,241

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